APPENDIX N: OPTIONAL DATA CATEGORIES FOR CATALOGING NATURAL HISTORY SPECIMENS

The following data categories were taken from the following:

Natural Science Data Dictionary of the Canadian Heritage Information Network, Documentation Research, Publication 2, Revision, Museum Services Division, October 1988.

All fields may contain multiple entries; for example the collector field may contain two collector names.

A. HIGHLY RECOMMENDED DATA CATEGORIES

The following data categories are highly recommended for cataloging natural history collections. Each bureau should select appropriate data to supplement the mandatory data in order to maintain a museum information system, designed to meet the bureau's needs for information and museum property management.

Associated Species

This refers to other specimens within the matrix or lot.

Bureau Region and/or Area

Name the administrative area or region of the unit in which the specimen is cataloged (e.g., Rocky Mountain Region).

Catalog Information

Provide data on who identified and cataloged the specimen and when, as follows:

Cataloged by

Record the name of the person cataloging the museum property. If there is room, give the full name and title (e.g., Doe, Jane A., Curator).

Cataloged by Date

Record the date the specimen was cataloged in standardized

order (e.g., MM/DD/YYYY, 04/23/1992).

Identified By

Record the full name of the person who identified or classified the specimen, if known. The identifier may be the investigator, collector, cataloger, or a discipline specialist.

Identified by Date

Record the date on which the identifications were made.

B. OPTIONAL DATA CATEGORIES

Adaptation/Specialization

Enter information on any special adaptations or specializations of the species.

Age/Stage

Record the age of the animal or plant specimens, or the stage in the development or life cycle.

Analytical Compositions

Record qualitative or quantitative data on the analytical and chemical-specific composition of the specimen.

Authority

Record the name of the authority who originally named the species.

Band/Tag Number

Enter the number on the band or tag attached to the specimen.

Banding/Tagging

Enter the type, color, and position of any band or tag attached to the specimen.

Behavior At Collection

Include notes on the specimen's behavior at the time of collection.

Biozone

Name the biostratigraphic zone or land mammal age from which the specimen originated.

Blood Smear

Record the reference number and location of any blood smear(s) associated with the specimen.

Breeding Data

Record the reproductive status of a specimen.

Burning

Record if the specimen shows any signs of burning.

Canopy

Describe the forest canopy where the specimen was collected.

Captivity Duration

Record the length of time the specimen was in captivity prior to preparation as a museum specimen.

Chemical Classification(s)

Record the chemical classification(s) of the (mineral) specimen.

Chemical Compositions

Record the (theoretical) chemical composition of the specimen.

Cloud Cover when Collected

Describe cloud conditions at the time the specimen was

collected.

Collection Method

Record the method of collecting. Examples include:

- capture
- salvage
- dip net sample

Collector Remarks

Provide any additional information on the circumstances of collection.

Color

Record the coloration of the specimen at the time of collection.

Commodity Type

Record the commercial use of the specimen.

Common Name

Enter the common name of the specimen (e.g., maple).

Component Part Identifier

Enter the names of the component parts of the specimen (e.g., skin and skull).

Condition

The standardization of condition assessments is recommended; the following definitions are suggested. Condition may include an assessment of completeness of the object as well as its stability.

For completeness, state the condition of the museum property by what is observable.

- **Complete:** 100% of specimen present
- **Incomplete:** > 50% and <100% of specimen present
- **Fragment:** ≤ 50% of specimen present

Note: > means greater than
< means less than
≤ means equal to or less than

For stability, the following criteria may be used.

- **Excellent:** No damage or deterioration
- **Good:** Minor damage and no active deterioration
- **Fair:** Some damage and/or slow but active deterioration
- **Poor:** Significant damage and/or active deterioration

Record the completeness of the specimen as determined by what was originally collected, if known. Record the specific condition of the specimen or remaining portion of the specimen in hand, regardless of whether it is complete, incomplete, or fragmentary. Note that a specimen, thus, can be incomplete, yet still in excellent or good condition.

Conservation File Number

Enter the file numbers of documents related to the conservation of a specimen.

Conservation Remarks

Enter remarks concerning the conservation of a specimen.

Counts/Measurements

Indicate whether counts, measurements, or sorting have been undertaken on the sample or specimens.

Cover

Record the nature of the vegetative cover where the specimen

was collected.

Crystal

Record crystallographic data on the specimen such as:

- crystal form
- twinning
- habit
- aggregation

Cultural Affiliation (Use)

Record the cultural attribution of the group of which the individual who used the specimen is a member (e.g., name of tribe).

Current

Qualitative description of the water current at the place where the specimens were collected.

Date Molded

Record the date a mold was constructed.

Date Prepared

Record the date the specimen was prepared.

Date Specimen Died

Record the date the specimen died.

Dating Technique

Note the technique or process utilized to arrive at the date.

Depositional Environment

For paleontology and geology specimens the depositional

environment may be described (e.g., paludal, swamp, or inland sea). For paleontology, include descriptions of the sedimentary environment of deposition, not paleoenvironmental hypothesis.

Depth

Record the depth for aquatic/marine sites. Information should be provided by the collector. Ideally all information should be in metric units. Do not convert to metric if metric measurements are not given by the collector.

Diet Data

Record a description of the contents of the alimentary tract.

Distance from Shore

Identify the reference points for measurements to locate the site where the sample was taken or the specimen collected.

Ecology/General Habitat

Describe the habitat where the specimen was collected.

Eggs

Note presence, identification, and incubation period.

Electrophoresis

Record the results of electrophoresis undertaken on a sample from the specimen.

Elevation

Record the elevation of terrestrial sites (e.g., 550 m). Use only information provided by the collector. Ideally all information should be in metric units.

Environmental Factor Remarks

Record remarks concerning the environmental factors at the

time of specimen collection.

Experimental Data

Describe experiments or analyses that have been done on the specimen.

Exposure

Record the nature of the geological collection site. For example:

- cliff
- quarry
- road cutting

Family Date

Note the year of publication of the family name entered into this data category.

Flora/Fauna

Record the accepted name of the fauna or flora of which the specimen is a member.

Forma

Record the scientific name of the forma or form to which the specimen has been assigned.

Formation

Indicate the member of the geological formation from which the specimen was collected if the formation is so subdivided (e.g., Jurassic, Brushy Basin Member).

Fossils in Specimen

Note the kind(s) of fossil(s) present in the specimen.

Gear/Trap Type

Record the type of gear or trap used to collect or capture the specimen.

Genitalia

Include the reference number and location of the species genitalia.

Genotype

Note the genetic determinants or constitution of the specimen.

Genus Date

Record the date (year) of publication of the genus name.

Genus Number

Record the data such as Dalla Torre and Harms numbers for seed plant genera.

Geological Period

Record the geological period of the specimen (e.g., Silurian or Quaternary).

Glacial-Interglacial

Record if the specimen is from a glacial or interglacial period of the pleistocene epoch.

GSA Codes

GSA geographical location codes provide numeric codes for states and countries.

Habitat

For Biology specimens record a brief description of the habitat of the collection site (e.g., marsh or spruce-fir forest).

Herbarium Code

Record the appropriate code from those listed in the Index Herbariorm, Part I, Holgren & W. Keuken, Utrecht, Netherlands.

Horizontal Datum Reference

Note the stratigraphic position on the collection site.

Host Classification

Name the phylum, class, and lower taxa of host specimens on which the primary specimen was found.

Humidity when collected

Record the level of relative humidity in the collecting area when specimen was collected.

Hybrid

Record the hybrid formula, including the names and sex of parental species.

Ice Extent

Describe the extent of or the thickness of ice on the waterbody when the specimen was collected.

Isotopic Dating and Data

Record the isotopes used in radio metric dating of the specimen.

Karyotype

Record the reference number and location of a karyotype of the specimen.

Lab

Record the name, address, phone/fax, company/institution, and contact person of the laboratory that analyzed the specimen.

Land Use Type

Record the nature of land use at the collection site, such

as:

- town
- park
- village
- pasture

Maintenance Cycle

Record the scheduled maintenance procedures for storing collections.

Map Reference and Remarks

Note the reference code for a relevant and standardized map.

Measurements

Give the dimensions and/or weight of specimen as follows:

- Dimensions

Follow the generally accepted convention for measuring natural history specimens. If no convention exists, the measurements should be taken from the widest, highest or longest part of the specimen, preferably in metric units.

Measurements generally are not used for plants or insects, but are common for mammals, birds, and reptiles. Biological specimens should be measured fresh. Do not remeasure specimens as measurements change as specimens dry. Geological specimens should be measured, as appropriate. Measurements will often appear on the specimen label and more detailed measurements may be given in a designated description field.

All measurements in the same series should be in the same units. Refer to Appendix K for uniform techniques for recording dimensions and weights.

- Weight

Record the weight of the specimen, preferably in metric units.

Biological specimens should be weighed fresh. Do not reweigh specimens as weights change as specimens dry. Geological specimens should be weighed, as appropriate.

In the case of lot-cataloged material the cataloger will need to decide if it is appropriate to weigh the entire lot, weigh a diagnostic or representative object, or not weigh any specimen within the lot.

Measuring Device Used

This category may be used to describe the measuring device used to obtain certain measurements while cataloging. Examples include:

- balance
- measure, tape
- calipers, electronic

Micro Habitat

Describe the specific cover of the specimen when collected.

Mine Details

Describe the location within the mine where the collection was made (e.g., drift, slope, or lend).

Mine Name

Record the name of the mine, quarry, prospect, claim, occurrence, or deposit where the specimen was collected.

Molder

Provide the name, address, phone/fax, and company/institution.

Morph

Describe the phase of a polymorph animal or mineral specimen, polymorphic form.

Mutant

Record information on mutant or chromosomal forms the specimen illustrates.

Optical Properties

Provide information on optical properties of the specimen, such as reflection, retraction, or lustre.

Order

Provide the scientific name of the order to which the specimen belongs.

Other Numbers

Record other numbers assigned to the museum property, such as field specimen numbers or catalog numbers of a previous owner or catalog system. For discussion of retention or removal of previous owner's numbers (see Appendix J).

Oxygen

Record the amount of oxygen in water at the time the specimen was collected.

Paleo-Environment

Describe the nature of the environment in which the specimen lived (e.g., subtropical).

Partial Specimen

Provide information on anatomical parts of incomplete specimens.

Pathology

Record any abnormalities or pathological conditions noted on the specimen.

Permit Number

Record the number assigned to the institution or collector given permission to collect.

Phenology

Record the stage of development of fertility of the plant specimen (e.g., spore-bearing or fruiting).

Phenotype

Provide the name of the phenotype (based on observable characteristics of the specimen produced by the interaction of genes and the environment).

Physical Properties

Record data on the physical properties of the specimen.

Population Activity Level

Indicate the activity from which the specimen was collected (e.g., swarming or migrating).

Population Size

Record the size of the population from which the specimen was collected.

Preservation/Preparation Date

Indicate the date the specimen was preserved or prepared.

Preservation Priority

Indicate if the specimen is in need of conservation treatment (this is often done through use of a coded numerical ranking).

Publication

List all pertinent publications known to make reference to the specific specimen cataloged.

Quantity Detail

Include specifications of the quantity of various categories within a single species lot (e.g., age, sex, or partial specimens).

Quantity Partial Specimen

Include the quantity, count, or number of (partial) specimens represented in the lot.

Quantity Replicates

Include the number of duplicates or replicate specimens in the lot.

Record Restrictions

Indicate if the associated documentation is subject to restrictions due to sensitive information to the extent permitted by law.

Salinity Quantity and Quality

Record the saline quantity and quality of the body of water where the specimen was collected (e.g., 50.0, 033.5; fresh or brackish).

Sample Number

Enter the number of the sample from which the specimen or lot was taken.

Sea State When Collected

Describe the state of the sea (e.g., glassy, gigantic, or 10m waves).

Secchi Disk

Record the depth at which the disk is no longer visible. This is a quantitative measure of water clarity of the water

body where the specimen was collected. Refer also to "Water Quality When Collected."

Selectivity

Indicate how the sample or subsample was selected.

Sex

Indicate the sex of the specimen (e.g., male, female, or hermaphrodite).

Significant Features

Note any unusual features of specimens not already covered in other fields.

Skeleton/Skull

Note the condition, integrity, or degree of ossification of skeleton and skull of the specimen.

Slope

Provide the compass inclination and direction.

Social Organization

Note the social grouping from which specimen was collected.

Species Date

Record the year of publication of the species name.

Species Number

Record the standard number from references such as the McDonnis check list number for Lepidoptera.

Species or Subspecies Common Name

Record the common or vernacular name by which species or subspecies is known.

Specimen Genetic Class

Record genetic origin information.

Specimen Molded

Describe the part(s) of the specimen from which the mold(s) was/were made.

Specimen Previous Name

Note previous or obsolete common names, or misidentifications.

Stratigraphic Bed

Name the rock strata from which the specimen originated.

Sub-Family

Provide the scientific name of the sub-family to which the specimen has been assigned.

Sub-Genus

Provide the scientific name of the sub-genus to which the specimen has been assigned.

Sub-Genus Authority

Name the authority who originally named the sub-genus.

Sub-Kingdom

Provide the scientific name of the sub-kingdom to which the specimen has been assigned.

Sub-Order

Provide the scientific name of the sub-order to which the specimen has been assigned.

Sub-Phylum

Provide the scientific name of the sub-phylum to which the specimen has been assigned.

Sub-Species

Provide the scientific name of the sub-species to which the specimen has been assigned.

Sub-Species Authority

Note the authority who originally described the sub-species.

Sub-Species Date

Note the year of publication of the sub-species name.

Sub-Species Number

Enter the code number assigned to the sub-species.

Symbiotic/Parasites

Indicate the presence or absence of parasites.

Synonyms

Provide any other names that have been used for the taxa.

Taxonomic File Number

Include the shelving numbers for taxonomic specific storage locations (e.g., California System, University of Michigan group).

Taxonomic Remarks

Record clarifying remarks concerning the taxonomy of the specimen.

Temperature of Air when collected

Record the temperature of the air (in degrees Celsius) when the specimen was collected.

Terrestrial/Aquatic

Note the general habitat of the specimen.

Testing Date

Note the date the specimen or sample was tested to determine its geological age.

Texture/Structure

Describe the size, shape, and arrangement of grains in a rock.

Tide Zone and Remarks

Record the quantitative measurement of the tide zone and the state of the tide where specimen was collected.

Tooth Marks

Indicate if the specimen shows any sign of carnivore predation or rodent gnawing marks.

Type Authority

Provide the name of the person who described the taxon; this may not necessarily be the same person who designated the type specimen.

Type Status

Identify the kind of type or type status (e.g., paratype or holotype).

Type Verifier

Provide the name of the person who verified the type.

Variety

Provide the scientific name of the taxonomic variety of the specimen.

Variety Authority

Provide the name of the authority to whom the variety is

attributed.

Variety Date

Record the date (year) of publication of the variety name.

Vertical Datum Reference

Record the stratigraphic position on the collection site.

Vessel/Vehicle Name

Record the type or name of the vessel or vehicle used in collecting the specimen.

Voucher

Voucher specimens verify the results of field research projects or other activities.

Water Depth

Record the maximum depth of the waterbody where the specimen or sample was taken.

Water Quality When Collected

Provide a qualitative assessment or description of clarity and quality of the waterbody where the specimen was collected. Refer also to "Secchi Disk."

Waterbody/Drainage

For aquatic and marine sites only, record the water body of the collection site by listing the name of the ocean, bay, lake, or river (e.g., Gulf of Mexico, Merced Lake, or Potomac River).

Wave Exposure

Describe the exposure of the specimen to wave action.

Wind Direction and Velocity When Collected

Record the measured velocity and direction of wind at the

time the specimen was collected.

X-Ray Data

Indicate if the specimen has undergone x-ray studies, including the x-ray file number.